

Appl. No. 10/804,322  
Reply to Office action of Oct. 21, 2005  
Page 9

### **REMARKS**

In accordance with the forgoing, the specification and claims 11, 15 and 23 have been amended merely correct minor typographical errors. Claims 1-24 are pending and under consideration. Certain claims were rejected under 35 U.S.C. 102(b) as being anticipated and other claims were rejected under 35 U.S.C. 103(a) as being obvious. Applicant respectfully traverses the rejections and requests a withdrawal of all rejections as set forth below.

Applicant would like point out that claims 1-24 stand rejected, however a statement of rejection regarding claim 21 has not been provided.

Claim 11 has been amended above merely to correct a typing error by setting forth "control circuitry controlling the switching elements."

#### **I. Claim Objections**

Claims 15 and 23 were objected to due to typing errors. Applicants wish to express appreciation to the Examiner for pointing out these errors, which are now corrected in the above amended claims.

#### **II. Claim Rejections – Double patenting**

Claims 1, 4, 7-9, 11, 15, 16, 17, 22 and 23 are provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5, 7, 10, 23 and 29 of copending Application No. 10/804,780.

Applicants acknowledge the provisional rejection and elects to defer responding to the rejection until issuance of one of the copending applications.

#### **III. Claim Rejections – 35 USC § 102**

Claims 1, 4, 7 and 8 stand rejected as being anticipated by Imran et al. (U.S. Pat. No. 4,614,192, hereinafter "Imram"). Imram discloses an implantable cardioversion system employing an electrode adapted to be located in the superior vena cava and a patch electrode for delivering defibrillating pulses (Col. 4, lines 20-26). In the preferred embodiment, the defibrillator can deliver four

pulses. After delivering an initial pulse, re-detection takes place and if the arrhythmia is still present, charging is initiated and a second pulse is delivered after completion of the charging cycle. This pattern continues if necessary, until the fourth high-energy shock is delivered (Col. 4, lines 4-11). Applicant respectfully asserts that the Examiner has incorrectly considered the defibrillating pulses as a pulse waveform corresponding to multiple signals delivered simultaneously to multiple pathways. The defibrillation pulses, as taught by Imram, are delivered along a pathway between the two high-voltage delivery electrodes and are separated in time by the charging cycle.

Imram, therefore, does not teach delivering a pulse waveform corresponding to multiple signals delivered simultaneously to multiple pathways between a plurality of electrodes as specified in claim 1 of the present invention. As such, independent claim 1 and claims 4, 7, and 8 dependent thereon are patentably distinguishable from Imram, and withdrawal of the rejection is respectfully requested.

Claims 1, 4, 9 and 17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Stemple (U.S. Pat. No. 4,566,457, hereinafter "Stemple"). Stemple discloses an electrical circuit for pulse energy generation at two electrodes of a defibrillator (Col. 1, lines 48-50). Stemple does not teach delivering a pulse waveform corresponding to multiple signals delivered simultaneously to multiple pathways between a plurality of electrodes as specified in independent claims 1 and 17 of the present invention. As such, independent claim 1 and claims 4 and 9 dependent thereon and independent claim 17 are patentably distinguishable from Stemple, and withdrawal of the rejection is respectfully requested.

Claim 24 stands rejected under 35 U.S.C. 102(b) as being anticipated by Altman et al., (U.S. Pat. No. 4,726,379, hereinafter "Altman"). Altman teaches a cardiac pacer that uses switched capacitor circuits for maintaining isolation between an atrial channel subsystem and a ventricular channel subsystem. The Examiner has incorrectly considered the operation of the switched capacitor

Appl. No. 10/804,322  
Reply to Office action of Oct. 21, 2005  
Page 11

circuit as disclosed by Altman to be generating a plurality of output pulses to each of a plurality of electrodes, and controlling switching elements associated with each of the plurality of electrodes in a predetermined pattern, as taught by the presently claimed invention.

Altman teaches a switched capacitor circuit operable to transmit cardiac signals from the lead of one subsystem to the sensing circuit of the subsystem such that the subsystem provides no return current path for stimulating pulses from the stimulator of the other subsystem (Col. 3, lines 40-44.). Altman does not teach controlling switching elements to generate a pulse waveform as multiple signals delivered simultaneously to multiple pathways associated with a plurality of electrodes as specified in independent claim 24 of the present invention. As such, the presently claimed invention is patentably distinguishable from Altman, and withdrawal of the rejection is respectfully requested.

#### **IV. Claim Rejections – 35 USC § 103**

Claims 2, 3, 6, 10-16, 18-20, and 22-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over various cited references including Imram, Stemple, Belt (U.S. Pat. No. 4,436,093, hereinafter "Belt"), and Kuck et al. (U.S. Pat. No. 5,921,923, hereinafter "Kuck").

As discussed above Imram discloses an implantable cardioversion system employing an electrode adapted to be located in the superior vena cava and a patch electrode for delivering defibrillating pulses. Stemple discloses a defibrillator electrode and electrical circuit for generating pulses of energy at the electrodes of a defibrillator. Stemple teaches a shunt switch that has a normally closed condition which shunts the electrodes, being opened only for the duration of a shock treatment.

Belt discloses a battery powered external pacer including a sense amplifier having an active notch filter system for attenuating power line interference. Kuck teaches a multiple electrode array that senses electrical events in heart tissue at different orientations in a localized region.

Appl. No. 10/804,322  
Reply to Office action of Oct. 21, 2005  
Page 12

None of the cited references, alone or combined, teach or suggest delivering a pulse waveform corresponding to multiple signals delivered simultaneously to multiple pathways between a plurality of electrodes as set forth in independent claims 1, 11, 17, and 24 of the present invention. Accordingly, dependent claims 2, 3, 6, 10, 12-16, 18-20, and 22-23 are patentably distinguishable from the prior art documents, and withdrawal of the rejection is respectfully requested.

#### V. Conclusion


There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this Amendment, the Examiner is requested to telephone the undersigned attorney to attend to those matters.

Respectfully submitted,

KEVIN WANASEK ET AL.

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Date

  
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